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SEP 11 2013

Ref: 8EPR-N

Mitch Iverson
Bureau of Land Management
South Dakota Field Office
310 Roundup Street
Belle Fourche, SD 57717

Re: Draft South Dakota Resource Management Plan and Environmental Impact Statement CEQ #20130165

Dear Mr. Iverson:

In accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4332(2)(C), and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609, the U.S. Environmental Protection Agency Region 8 (EPA) has reviewed the Bureau of Land Management's (BLM) South Dakota Draft Resource Management Plan and Environmental Impact Statement (Draft RMP/EIS) as prepared by the South Dakota (SDFO). We appreciated the opportunity to work with the BLM prior to the public release of the Draft RMP/EIS. This collaboration has allowed us to work through a number of air resources issues, and to come to agreement on how to address them. In providing the following comments, we remain committed to working with the BLM to seek ways to address them.

Background

This Draft RMP/EIS describes and analyzes alternatives for the planning and management of public lands and resources administered by the BLM SDFO. The planning area for the SDFO and this Draft RMP/EIS cover the entire state of South Dakota, which includes approximately 49.3 million acres. Within the planning area, the BLM administers about 274,000 acres of public land surface estate. The majority of BLM-administered surface estate is located in Harding, Butte, Lawrence, Pennington, Custer, Fall River, Perkins, Meade, Ziebach, and Jackson counties. The BLM manages approximately 1.7 million acres of federal mineral estate in 37 counties in South Dakota. Over 99 percent of the BLM-administered surface and mineral estate in the planning area is located in western South Dakota. The South Dakota RMP/EIS would revise the South Dakota RMP (1986), Miles City Oil and Gas EIS (1994), and the Fort Meade Recreation Area ACEC Plan (1996).

The Draft RMP/EIS considers four alternatives. Alternative A is a continuation of current management (No Action Alternative). Under this alternative, use of public lands and resources would continue to be managed under the existing management plans and guidance. Alternative B emphasizes resource development, while limiting protective management of resources. Alternative C emphasizes the most

protection of resources, while still providing for use of resources. Alternative D increases conservation of physical, biological, cultural and visual resources compared to Alternatives A and B and does not provide the more stringent resource protection measures that were developed under Alternative C. Alternative D is the BLM's current Agency Preferred Alternative.

The EPA's Comments and Recommendations

The EPA's comments, along with recommendations for how the BLM might address them, are specific to the following issues: (1) air resources; (2) groundwater resources; (3) surface water resources; (4) public drinking water supply sources; (5) wetlands, riparian areas and floodplains; (6) water management and water resource monitoring; (7) environmental justice; and (8) climate change.

(1) Air Resources

Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through NEPA

The U.S. Department of Interior, the U.S. Department of Agriculture and the EPA signed the "Memorandum of Understanding (MOU) Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions through the National Environmental Policy Act Process" on June 11, 2011. The BLM Montana Office has done an excellent job of implementing this MOU and coordinating the associated Air Quality Technical Workgroup (AQTW) members since February of 2012. We believe the collaboration among the federal and state agencies participating in the AQTW has ensured that effective and efficient NEPA air quality evaluations have occurred and will continue to do so moving forward and that air quality will be protected. Since many of our comments already have been addressed through the AQTW, our remaining comments below are intended to provide clarification to the Draft RMP/EIS and supporting documents.

Disclosure of Potential Impacts

BLM conducted near-field modeling to disclose potential impacts to the National Ambient Air Quality Standards (NAAQS) in the South Dakota planning area, which included an assessment of potential impacts to 3-hour SO_2 concentrations. We thank BLM for including 3-hour SO_2 impacts in the Draft RMP/EIS and Air Resources Technical Support Document (ARTSD) based on our comments on other RMPs.

Modeled concentrations have been presented for 3-hour SO_2 and the background concentration for SO_2 has been assumed to be zero. Including background concentrations is necessary to assess total air quality conditions, as well as to assess potential air quality impacts for comparison to the NAAQS. SO_2 data at Wind Cave and Badlands monitors in South Dakota from 2009 to 2012 indicates that the mean ranges from 0.12 to 1.6 ppb and the 99^{th} percentile ranges from 2.6 to 10 ppb. We recommend that the Final RMP/EIS include a representative 3-hour SO_2 background concentration for the 3-hour SO_2 near-field air quality model NAAQS compliance demonstrations or explain why a background concentration of zero has been assumed.

Air Resource Management Plan (ARMP)

The Draft RMP/EIS includes an ARMP for oil and gas activities that describes the air resource adaptive management strategy to be used to assess future air quality and air quality related values (AQRVs) and to identify mitigation measures to address unacceptable impacts associated with future oil and gas development. ARMP Section 6.1 describes initial mitigation measures that will be applied upon issuance of the Record of Decision (ROD) through leasing documents and project-specific NEPA documents. We fully support these initial mitigation actions and commend the BLM for its efforts to protect air quality from the outset.

The ARTSD, p.6, states that Tier 4 emission standards were assumed in the Draft RMP/EIS near-field modeling analysis in order to demonstrate compliance with the 1-hr NO_2 NAAQS. We note that the ARMP, Section 6.1, initial mitigation requirement for diesel drill rig engines >200 hp to meet Tier 4 emission standards for non-road diesel engines indicates that "oil and gas operators may use drill rig engines that exceed Tier 4 emission standards if modeling demonstrates compliance with the NAAQS and protection of AQRVs." We assume that this caveat means that additional near-field modeling will be required at the project-level if higher-emitting engines will be used. We recommend the Final RMP/EIS and ROD include this commitment.

We also note an inconsistency between the ARMP and Draft RMP/EIS Chapter 4, Environmental Consequences. Section 6.1 of the ARMP includes an initial mitigation measures list that does not include a requirement for drill rig and completion engines greater than 750 hp to meet Tier 4 generator set emission standards even though this was the emission rate used in the near-field modeling exercise (see the ARTSD, page E-1, for modeled drill rig emissions). Both the Draft RMP/EIS Chapter 4 (page 487) and the ARTSD (page 6) reference this assumption. Based on conversations between our staffs, we understand that BLM's near-field modeling analysis included the Tier 4 generator set emission rate for engines greater than 750 hp in order to be representative of what is currently happening in the field (based on BLM experience), and that BLM does not believe requiring Tier 4 generator set emissions standards for engines greater than 750 hp is necessary to demonstrate compliance with the 1-hour NO_2 NAAQS. To disclose BLM's intent, we recommend that the Final RMP/EIS include the following:

- Clarification regarding which mitigation measures were necessary to ensure compliance with the NAAQS; and
- An explanation as to why BLM believes not requiring drill rig and completion engines greater than 750 hp to meet Tier 4 generator set emission standards will demonstrate compliance with the 1-hour NO_2 NAAQS.

The ARMP Section 6.2.1, Monitoring-Based Thresholds before Photochemical Grid Model (PGM) Completion, indicates that prior to completion of the PGM analysis, monitoring-based thresholds for determining enhanced mitigation would be based on evaluation of monitored exceedances of the NAAQS. The discussion of modeling-based thresholds for evaluating enhanced mitigation (Section 6.3.1), differs by stating that enhanced mitigation would be based on "potential future impacts" on NAAQS. To provide clarity regarding the trigger and consistency within the ARMP, we recommend replacing the language in Section 6.2.1 and 6.3.1 with "modeling-based thresholds for determining

enhanced mitigation would be based on potential future NAAQS exceedances as predicted via future PGM."

Finally, we recommend the following edits to the Draft ARMP to clarify terminology and/or to reflect recent discussions of the AQTW:

- ARMP pages 1113 - 1116: We understand that BLM intends to run the PGM to cover the full 20 year planning cycle of the RMP rather than performing an initial PGM run followed by periodic reassessments as described in Section 5.1.2 on page 1114. We recommend revising the text to clarify this point. In addition, we recommend revising Table B.4., to include time in the schedule for the AQTW to review results from emissions modeling.
- Section 6.2.3, indicates that following PGM completion, BLM would calculate design values for each pollutant monitored at a federal reference monitor within the planning area. For regulatory purposes, the EPA treats data from Federal Regulatory Monitors and Federal Equivalent Monitors similarly. For some criteria pollutants, such as ozone and SO_2, all or nearly all regulatory monitoring is done with Federal Equivalent Monitors. For completeness, we recommend the BLM use the phrase "Federal Reference or Equivalent Monitors" when it discusses the monitors to be used.
- Section 6.2.4, does not include a timeline for implementation of enhance mitigation after the PGM is completed. We recommend a 1-year timeline for implementation of measures after selection of enhanced mitigation, similar to the timeline provided for implementation of enhanced mitigation measures prior to PGM completion (see Section 6.2.2: "Selected mitigation measures would be implemented within 1 year after the BLM decision to apply additional mitigation," or Section 6.3.2: "Modeling-Based Enhanced Mitigation Measures").
- General Comment: We note numerous typographical errors referencing "Section 0." It appears this placeholder was not updated prior to printing. We recommend ensuring that these references will be addressed in the Final RMP/EIS.

Air Resource Technical Support Document

It is important that the emissions controls and mitigation measures used to develop the emissions inventory be included as required mitigation measures for activities under the RMP. The alternative-specific emissions inventory includes a 50% or 75% control efficiency for calculating dust emissions. The ARTSD, p. 6, identifies assumptions used in this emissions inventory, including a 50% fugitive dust control efficiency for dust suppression but no mention of a 75% control. If 75% control efficiency was used in the near-field modeling for some sources, then we recommend that these sources and this control efficiency be added to the identified assumptions on p. 6 of the ARTSD. We also recommend that these control measures be added to the initial mitigation list of the ARMP, Section 6.1.

In addition, we have a few recommendations for clarification of the ARTSD, as follows:

- pp. 14 - 15: Figure 1 illustrates the well pad and receptor layout for PM_{10} and $PM_{2.5}$ modeling. Please clarify whether this same receptor layout was used for the other criteria pollutants.
- p. 17: The background concentration for 3-hour SO_2 is listed as being zero in Table 14. As discussed above, please ensure that a representative 3-hour SO_2 background concentration is

used for the 3-hour SO_2 near-field air quality model NAAQS compliance demonstrations or explain why a background concentration of zero has been assumed.

- pp. 19-20 - Predicted criteria air pollutant concentrations were compared to the NAAQS and Prevention of Significant Deterioration increments. For disclosure purposes, we recommend the annual comparisons for the NAAQS be discussed in this paragraph.

(2) Groundwater Resources

Groundwater Resource Characterization

The existing and potential future groundwater use in the region make it important to characterize the groundwater resources within the planning area. We recommend expanding the discussion in the Final RMP/EIS, Chapter 3, Affected Environment, to include the following information:

- A description (including maps) of all aquifers in the study area, noting which aquifers are Underground Sources of Drinking Water (USDWs). Federal Safe Drinking Water Act regulations define a USDW as an aquifer or portion thereof: (a)(1) which supplies any public water system; or (2) which contains a sufficient quantity of ground water to supply a public water system; and (i) currently supplies drinking water for human consumption; or (ii) contains fewer than 10,000 mg/l total dissolved solids; and (b) which is not an exempted aquifer (See 40 CFR Section 144.3); Maps depicting the location of sensitive groundwater resources such as: municipal watersheds, source water protection zones, sensitive aquifers, and recharge areas. We recommend contacting Tom Brandner, South Dakota Department of Natural Resources (SDDNR), Groundwater Quality Program at (605) 773-3296 and Derric Iles, South Dakota Geological Society at (605) 677-5227 for this information;
- A description of any existing information regarding the locations and causes of groundwater contamination; and
- Data on the amount of annual use of groundwater in each of the major aquifers.

Groundwater Impacts and Mitigation

The Draft RMP/EIS describes impacts to groundwater resources that may result from RMP activities and it identifies some measures that the BLM might require to reduce these impacts. The EPA appreciates that the SDFO has included mitigation measures that could be required at the project level or the application for permit to drill (APD) stage that would minimize impacts to groundwater resources. Appropriate groundwater protection measures can vary depending on hydrologic conditions and the presence of drinking water resources. The EPA recommends that the following additional mitigation measures be included in the Final RMP/EIS:

- Best management practices and other mitigation measures for oil and gas activities such as closed loop drilling, monitoring of water quality and water levels, closure and monitoring of reserve pits, and lining and monitoring of evaporation ponds that will be required;
- Setback stipulations, such as No Surface Occupancy (NSO) for oil and gas activities, to minimize the potential for impacts to current and potential drinking water resources, including domestic water wells and public water supply wells. The EPA recommends a minimum 500-foot setback for

private wells. Setbacks provide an opportunity for released contaminants to attenuate before reaching a water supply well. They may also afford an opportunity for a release to be remediated before it can impact a well, or for an alternate water supply to be secured. We note that the North Dakota Oil and Gas Commission has adopted a 500-foot setback from occupied dwellings (and by default, the associated domestic well);

- A mitigation plan for remediating future unanticipated impacts to groundwater from RMP activities, such as requiring the operator to remedy those impacts through treatment, replacement, or other appropriate means; and
- A general oil and gas production well schematic that depicts the following: casing strings; cement outside and between the various casing strings; and the relationship of the well casing design to potentially important hydro-geological features such as confining zones and aquifers or aquifer systems that meet the definition of a USDW. We recommend discussing how the generalized design will achieve effective isolation of USDWs from production activities and prevent migration of fluids of poorer quality into zones with better water quality.

(3) Surface Water Resources

Surface Water Resource Characterization

Table 3-11 of the Draft RMP/EIS includes information on impaired water bodies on BLM land in South Dakota based on South Dakota's 2010 Clean Water Act (CWA) Section 303(d) Impaired Waters List. It appears that some of the information regarding probable impairment types and probable impairment sources is missing. We recommend that the Final RMP/EIS be updated to include the missing information regarding probable impairment types and probable impairment sources. We also recommend that the Final RMP/EIS reference South Dakota's 2012 Clean Water Act (CWA) Section 303(d) Impaired Waters List, as approved by the EPA. It would be useful for the Final RMP/EIS to discuss water quality trends observed between 2010 and 2012 to more fully describe current conditions in, and downstream of, the planning area. Additionally, we recommend the Final RMP/EIS describe the current water quality conditions, if available, for each surface water body in the planning area, including perennial, intermittent and ephemeral streams, rivers, lakes, reservoirs; and surface water drinking water sources.

A detailed map showing all impaired waterbodies within the planning area, as well as impaired waters downstream of the planning area, would be a useful tool in the Final RMP/EIS to convey the latest available information regarding existing water quality. For ease of identification, we suggest adding waterbody segment ID numbers to the table of CWA Section 303(d) waters. In addition, if SDDNR has not assessed the water quality in all waterbodies within the planning area, then we recommend that the Final RMP/EIS list such waterbodies and indicate that the water quality condition has not yet been assessed by SDDNR.

Sediment and Nutrient Analysis

The 2012 South Dakota Integrated Report for Surface Water Quality Assessment states that sediment and nutrients conveyed in surface water runoff are the main nonpoint source pollutants impacting South Dakota lakes and reservoirs. We recommend that the Final RMP/EIS include an analysis of the impacts from sediment and nutrients on all types of waterbodies.

Because sediment loading has already caused impairment of numerous waterbodies in the planning area, and future activities that may be authorized under this RMP, including oil and gas development, livestock grazing and mining would result in new surface disturbance that may contribute to erosion, it is important the Final RMP/EIS include additional information about this concern. Erodible soils represent a significant source of pollutants in the planning area. For this reason, we recommend the Final EIS include a map depicting areas of steep slopes and fragile or erodible soils and proximity to surface waters. Depending on a host of variables including soil characteristics, industrial operations and topography, associated runoff could introduce sediments as well as salts, selenium, heavy metals and other pollutants into surface waters. To fully disclose and, if necessary, mitigate the potential impacts of soil disturbance, we recommend that the Final RMP/EIS include an estimate of erosion rates, by alternative, in areas where fragile or erodible soils are present. For example, the Wyoming BLM's Bighorn Basin Draft RMP/EIS estimated erosion rates based on projected amount of surface disturbance, types of surface disturbance and general characteristics of the basin (erodible soils, slopes, etc.). Erosion rates were calculated using the Water Erosion Prediction Project model (WEPP), a web-based interface developed by the U.S. Department of Agriculture, Agricultural Research Service, which can be accessed at http://ars.usda.gov/Research/docs.htm?docid=10621. We recommend that the BLM consider using this model or another appropriate model.

Surface Water Impacts and Mitigation

Contaminants from surface events such as spills, pit and pipeline leaks, and nonpoint source runoff from surface disturbance have the potential to enter and impact surface water resources if these events occur in close proximity to water bodies. If surface activities are set back from the immediate vicinity of surface water, wetlands, and designated source water protection zones, this provides an opportunity for accidental releases to be detected and remediated before impacts reach water resources. If accidental releases are not detected, the setback provides a safety factor and some possibility of natural attenuation occurring. Setbacks also help prevent nonpoint source pollutants such as sediments from impacting surface waters.

Oil and Gas Leasing Stipulations to Protect Water Resources: The Preferred Alternative includes water resources protections through oil and gas leasing stipulations. Specifically, the Preferred Alternative proposes the following NSO stipulation: "No Surface Occupancy: Riparian areas, wetlands, 100 year floodplains of rivers and streams and water bodies and areas within 300 feet of these features would be managed as No Surface Occupancy and Use for oil and gas leasing. At the implementation level any proposed projects that are located in areas identified as a 100 year floodplain (currently defined by "flooded soils" in the NRCS data set) would be evaluated for features that the stipulation is designed to protect and the stipulation applied when such features are present." There is an exception to the stipulation that reads, "The Authorized Officer (AO) may grant an exception to this stipulation if the operator can demonstrate that the proposed action would not adversely impact wetland or riparian function or associated water quality." We have the following recommendations regarding the NSO stipulations:

- We recommend further clarification to the "streams" language by including intermittent and ephemeral streams in the list of water resources to be protected by the NSO stipulation.

- We recommend adding "springs" to the list of water resources protected by these stipulations in order to maintain proper function of these susceptible resources (e.g., see Grand Junction Field Office, NSO-4, Lentic Riparian Areas – which includes springs, seeps and fens).
- In reviewing numerous oil and gas leasing stipulations contained in other BLM EISs, we have not seen an exception process to allow drilling *within* water bodies or wetlands. It is our understanding that a "no exceptions approach" within a water body or wetland is BLM's standard procedure. We recommend removing the exceptions clause from the NSO stipulations given the importance of preventing disturbance within water bodies and wetland areas.
- We recommend BLM consider revising the 300 foot NSO setback for riparian areas, wetlands, 100 year floodplains of rivers and streams and water bodies and areas within 300 feet of these features to a 500 foot NSO setback for all surface water features. Other BLM Field Offices have required a 500 foot setback to minimize potential deterioration of water quality and to maintain natural hydrologic function of stream channels, stream banks, floodplains, and riparian communities (e.g., see Grand Junction Field Office Draft RMP/EIS, NSO-1, Major River Corridors; NSO-2, Streams/Springs).
- We recommend a 750-foot NSO buffer for water bodies that are impaired. This additional setback will minimize additional degradation of impaired waters in the planning area.

Potential Measures to Protect Water Resources from Impacts Due to Grazing: Grazing has the potential to adversely impact water resources, including surface and ground waters, wetlands, streams, springs and riparian areas. BLM's Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the BLM for Montana and the Dakotas (Rangeland Health Standards) underwent NEPA analysis in 1997 and are incorporated into the relevant RMPs, including the SDFO RMP.

We recommend that the Final RMP/EIS include a list of potential measures that could be implemented at the project level to meet Rangeland Health Standards. This list could include measures that the SDFO has taken in the past, as well as the following suggestions:

- Require special protections for high quality wetland resources such as springs and fens. Such protections might include development of alternative water sources, fencing to exclude livestock from a spring source, and redirection of spring water to a trough for watering;
- To avoid possible contamination of groundwater through livestock water wells, specify separation buffers between livestock water wells and water troughs or tanks;
- Specify steps to protect and/or repair any existing exclusions and upland water developments, and develop new range improvements to protect water resources;
- Monitor impacts from grazing adjacent to high value water resources;
- Adjust the timing of grazing by delaying Spring turnout, increasing rotation, and focusing grazing on areas less intensely used in the previous year; and
- Develop a monitoring plan and schedule to assess effectiveness of range improvements in protecting aquatic resources.

In addition, we recommend the Final RMP/EIS identify the general features of an effective adaptive management plan that could be employed at the project level, including the following:

- Achievable and measureable objectives;
- Specific thresholds that would trigger actions;
- Commitment to implement a monitoring plan with protocols to assess whether thresholds are being met; and
- Commitment to use monitoring results to modify management actions as necessary

The Draft RMP/EIS states that grazing use has been down since 2000 as a result of a statewide drought and that the primary factors for this reduction in use have been inadequate reservoir water and reduced forage production. It also states that permitted use levels have slowly begun to rebound in the last couple of years where precipitation has returned to normal. We recommend that the Final RMP/EIS include a description of how forage production is considered in determining permitted use levels.

(4) Public Drinking Water Supply Sources in South Dakota

Public Drinking Water Supply Source Characterization

In order to ensure that public drinking water supply sources [e.g., surface water sources, including groundwater under the direct influence of surface water (GWUDISW), and groundwater sources] are protected from potential impacts associated with BLM-authorized activities in the planning area, it is important to identify where these sources are located. Therefore, the EPA recommends that the Final RMP/EIS include a map delineating source water protection areas for public water supply wells. We also recommend identifying reservoirs that are drinking water sources.

Public Drinking Water Supply Source Mitigation

In order to ensure that public drinking water supply sources are protected from potential impacts associated with mineral extraction (including metals, rare earths, uranium, and oil and gas), the EPA recommends that BLM include in each of the alternatives avoidance or mitigation measures related to achieving water quality standards.

The EPA also recommends the BLM include a commitment in the Final EIS and ROD to provide notice to lessees regarding these important areas in the SDFO. For example, lease notices for drilling within Source Water Protection (SWP) Zones of public water supplies are now being used for all wells drilled under BLM authority within SWP Zones in Utah. The notices require the lessee to contact the BLM and the public water system manager to determine any zoning ordinances, best management or pollution prevention measures or physical controls that may be required within the protection zone.

(5) Wetlands, Riparian Areas and Springs

The Draft RMP/EIS indicates that springs and seeps are not common in the planning area and that the few springs and seeps that are present on public land are located in or around the Black Hills, mainly within the Exemption Area. It also indicates that occasionally, a spring or seep can be found near

floodplains along drainage ways. Although uncommon in the planning area, springs often contain rare or unique plant and animal species in addition to being important contributors to hydrologic function. Therefore, the EPA recommends that the Final RMP/EIS include a commitment for further analysis of springs at the project level, including evaluation of function or condition prior to authorizing any activities in these areas. To ensure that springs, as well as perennial seeps and wetlands, are identified to facilitate their protection, we recommend delineation and marking of perennial seeps, springs and wetlands on maps and on the ground before development. We appreciate that the Draft RMP/EIS describes mitigation measures that the BLM commonly applies when approving APDs for oil and gas construction, drilling and production activities to prevent adverse impacts to these aquatic resources. We encourage the BLM to continue to require best management practices such as silt fences, detention ponds and other stormwater control measures. Other potential mitigation measures, including oil and gas leasing stipulations and measures to protect water resources from grazing impacts, are discussed above under Surface Water Mitigation.

(6) Water Management and Water Resource Monitoring

Water Management

Water demand associated with the drilling and completion of oil and gas wells, uranium mining and hard rock mining is an important consideration that will benefit from careful analysis and disclosure. The EPA recommends the Final RMP/EIS analyze the following:

- Estimated water demand for the anticipated development in the planning area;
- Possible sources of this water; and
- Potential impacts of the water withdrawals (e.g., drawdown of aquifer water levels, reductions in stream flow and associated water quality, and impacts on aquatic life, wetlands, and other aquatic resources).

In addition, the EPA recommends the Final RMP/EIS analyze and disclose how flowback and produced water from oil and gas activities and how uranium waste fluids will be managed, including:

- Estimated volumes of material;
- Disposal options and potential discharge locations for managing the flowback and produced water from oil and gas activities and uranium waste fluids (i.e., UIC wells, evaporation ponds, and surface discharges);
- Possible target injection formations, formation characteristics and depth of any UIC wells; and
- Potential impacts of managing the flowback and produced water from oil and gas activities and the disposal of uranium waste fluids.

The EPA recommends BLM encourage operators to consider recycling oil and gas produced water for use in well drilling (after drilling the surface hole) and stimulation, thereby reducing the amount of water withdrawals and number of produced water management/disposal facilities and minimizing the associated impacts.

Water Resource Monitoring

The EPA recommends that SDFO require all BLM-authorized oil and gas multi-well projects to conduct groundwater and surface water monitoring, similar to RMP requirements included in recent EISs by other BLM Field Offices, e.g., White River and Grand Junction in Colorado. To that end, we recommend that the Final RMP/EIS address how water quality monitoring in the planning area will occur prior to, during, and after such development to detect impacts to both surface water and groundwater resources, including private well monitoring. A recent example of a water quality monitoring plan is the "Long-Term Plan for Monitoring of Water Resources" developed by BLM for the Gasco Energy Inc. Uinta Basin Natural Gas Development Project Final EIS[1]. Also, the National Ground Water Association's Water Wells in Proximity to Natural Gas or Oil Development Brief[2] provides information on the importance of baseline sampling for private wells and types of analysis recommended.

(7) Environmental Justice

The Draft RMP/EIS states that five American Indian Reservations are located in western South Dakota: Pine Ridge (Oglala Sioux), Standing Rock (Dakota and Lakota Sioux), Cheyenne River (Cheyenne River Sioux), Rosebud (Rosebud Sioux), and the Lower Brule (Lower Brule Sioux). In addition, many other tribes in eastern South Dakota and adjacent states have aboriginal territories that overlap the planning area. Due to the tribal significance of the area, we encourage the BLM to continue consultation with the tribes during project level planning and analysis.

Additionally, the Draft RMP/EIS discloses that American Indians represent nearly 9% of the population in the state with a high percentage living in poverty. Depending on the county, the percentage of people living below the poverty level is as high as 18.6% compared to 14.2% for the entire state. The Environmental Consequences chapter of the Draft RMP/EIS states that no alternative will result in identifiable disproportionate effects specific to any minority or low income population or community. Given the demographics of the area and the potential impacts from certain RMP activities, we recommend additional environmental justice analysis in future project-level EISs.

(8) Climate Change

The BLM has included an analysis and disclosure of greenhouse gas (GHG) emissions and climate change. We note that the GHG emissions inventory does not include oil and gas emissions from "downstream" activities such as refining that will occur outside the Planning Area. Because information on these "downstream" indirect GHG emissions from activities may be of interest to the public in obtaining a complete picture of the GHG emissions associated with BLM-authorized activity in the Planning Area, it may be helpful to estimate and disclose them.

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1 http://www.blm.gov/pgdata/etc/medialib/blm/ut/vernal_fo/planning/gasco_eis/gasco_folder_6.Par.10452.File.dat/28_Gasco%20Appendix%20O.%20Long-term%20Water%20Monitoring%20Plan.pdf

2 http://region8water.colostate.edu/PDFs/Water_Wells_in_proximityNGWA2011.pdf

The EPA's Rating

Based on our review, the EPA is rating the Draft RMP/EIS Preferred Alternative as Environmental Concerns – Insufficient Information (EC-2). The "EC" rating indicates that the EPA review has identified potential impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the Preferred Alternative or application of mitigation measures that can reduce these impacts. The "2" rating indicates that the EPA has identified additional information, data, analyses, or discussion that we recommend for inclusion in the Final RMP/EIS. A full description of the EPA's rating system is enclosed for your convenience (see Enclosure 1).

We appreciate the opportunity to comment on this document, and hope our suggestions will assist you with preparation of the Final RMP/EIS. We would be happy to discuss these comments and our suggested solutions. If you have any questions or requests, please feel free to contact me at 303-312-6925 or Vanessa Hinkle of my staff at 303-312-6561 or by email at hinkle.vanessa@epa.gov.

Sincerely,

Suzanne J. Bohan
Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation

Enclosure

ENCLOSURE 1
U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new, reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.